

REMARKS

Currently, claims 1 – 11 are pending in the present application. Claims 1 – 8 have been amended to remove figure numbers. Additionally, claims 1 and 5 have been further amended. Support for the amendments to claims 1 and 5 can be found, for example, in FIGS. 2 – 6. Claim 3 has been further amended. Support for the amendment to claim 3 may be found, for example, in original claim 7. Claim 16 has been added. Support for claim 16 may be found, for example, in original claims 1 and 2. The Examiner has imposed a restriction requirement and requested that Applicant elect one of three identified groups of claims for prosecution in connection with the present application. The groups of claims are as follows:

Claims 1 – 11, drawn to pressure control apparatus, classified in class 156, subclass 345.29;

Claims 12 – 14, drawn to method, classified in class 137, subclass 14; and

Claim 15, drawn to process chamber, classified in class 118, subclass 715.

APPLICANT'S ELECTION

Applicant respectfully elects the claims of Group I, i.e., claims 1 – 11; therefore, claims 12 – 15 have been withdrawn from consideration. Applicant reserves the right to file a divisional application for the non-elected claims during the pendency of this application.

CLAIM INTERPRETATION

The Examiner has made a correct claim interpretation in that claims 4 and 8 cite “said PCC”, which refers to the PCC in claim 1 (or 5), which is a PCC downstream from said process chamber.

DRAWINGS

The Examiner has stated that the drawings are objected to under 37 CFR 1.83(a). The Examiner states that the abatement chamber recited in claims 3 and 7 must be shown downstream from the third FRE. Original claim 7 does not state that the abatement chamber is located downstream from

the third FRE; instead, claim 7 recites that the abatement chamber is upstream. Claim 3 has been amended to recite that the abatement chamber is located upstream of the third FRE. Therefore, no amendment to the drawings is needed; and the drawings show every feature of the invention specified in the claims.

CLAIM REJECTIONS – 35 USC §112

Claims 3 and 7 have been rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. As stated above, claim 7 does not recite that the abatement chamber is downstream from the third FRE. Furthermore, claim 3 has been amended to recite that the abatement chamber is upstream from the third FRE. For example, FIG. 6 and the accompanying description on page 28, lines 20 – 28, of the specification describe the claimed subject matter in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

CLAIM REJECTIONS – 35 USC §102

Claims 1, 4, 5, and 8 – 11 have been rejected under 35 USC 102(b) as being anticipated by Bhatnagar et al. (US Patent No. 6,391,146, hereinafter “ the ‘146 Patent ”). This rejection is respectfully traversed.

Independent claim 1 recites “a first flow restricting element (FRE), wherein said first FRE is an immobile flow restricting element.” The ‘146 Patent clearly discloses the use of “throttle valves”, which cannot be considered an immobile flow restricting element. In fact, the present application clearly discloses the disadvantages of the use of “throttle valves:”

Unfortunately, the mechanical throttle valve is prone for deteriorated performance under most common 10 usage due to the growth of solid deposits on mechanical moving parts. These deposits can clog the valve or impede the mechanical motion that is necessary for adequate performance. In addition, the mechanical motion breaks-off deposits and is prone to make particles that are detrimental to process yield. Throttle valves produce flow turbulences that sometimes affect the process adversely and are further 15 notorious for dislodging particles from the throttle valve vicinity. In addition, the response of throttle valves to pressure fluctuations is often too slow and tends to develop oscillatory response that impact process results

disadvantageously. Oscillatory response is driven by the slow response of the mechanical device to pressure changes, in particular during the beginning and end of the process when 20 vast pressure changes are inevitable. The outcomes of throttle valve oscillatory response are disadvantageous process pressure fluctuations and back-flow from the throttle valve area carrying dislodged particles into the process space. (specification page 2, lines 8-22)

Clearly, a throttle valve cannot be considered to be “a first flow restricting element (FRE), wherein said first FRE is an immobile flow restricting element.” Therefore, the ‘146 Patent cannot be said to disclose every aspect of independent claim 1.

Furthermore, independent claim 5 recites “wherein said first FRE is an immobile flow restricting element.” For at least the same reasons explained above in relation to claim 1, independent claim 5 is distinct from the disclosure of the ‘146 Patent. Dependent claims 4 and 8 – 11 are believed to be patentable, at least by their dependence on claims 1 and 5, respectively. Therefore, reconsideration and withdrawal of the rejection of claims 1, 4, 5, and 8 – 11 is respectfully requested.

CLAIM REJECTIONS – 35 USC §103

Claims 3 and 7 have been rejected under 35 USC 103(a) as being unpatentable over the ‘146 Patent. This rejection is respectfully traversed. Applicant submits that, as described above, the ‘146 Patent does not teach all aspects of independent claims 1 and 5. Therefore, claims 3 and 7 are believed to be patentable at least by their dependence on claims 1 and 5, respectively. Reconsideration and withdrawal of the rejection of claims 3 and 7 is respectfully requested.

Claims 1, 2, 5, and 6 have been rejected under 35 USC 103(a) as being unpatentable over the ‘146 Patent. This rejection is respectfully traversed. Applicant submits that, as described above, the ‘146 Patent does not teach all aspects of independent claims 1 and 5, namely “a first flow restricting element (FRE), wherein said first FRE is an immobile flow restricting element.” Therefore, claims 2 and 6 are believed to be patentable at least by their dependence on claims 1 and 5, respectively. Reconsideration and withdrawal of the rejection of claims 1, 2, 5, and 6 is respectfully requested.

Furthermore, in relation to the rejection of claims 1, 2, 5, and 6, the Examiner states that it would have been “obvious to a person of ordinary skill in the art to have added an additional throttle

valve between the outlet (#212, Fig. 4) and pumps (#125) to further prevent backflow of effluent (#100).” The Examiner states that the motivation for this “would have been to prevent backflow.” This is a faulty motivation, since backflow in a location so close to a pump as depicted in Figs. 3 and 4 of the ‘146 Patent is very unlikely. The Examiner’s argued reasoning is equally faulty in respect to the motivation provided for adding an additional throttle valve as argued by the Examiner in relation to claims 3 and 7.

In view of the above amendments and remarks, Applicant believes the pending application is in condition for allowance. Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-1848, under Order No. 020008.0112PTUS from which the undersigned is authorized to draw.

Respectfully submitted,
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